

# Valuable Properties

For use at the beginning of the school year.

For each expression, use the property to write an equivalent expression.

Expression	Property	Equivalent Expression
1. $5 + x$	Commutative	_____
2. $7(x + 3)$	Commutative	_____
3. $9(a - 4)$	Distributive	_____
4. $8 + c$	Commutative	_____
5. $(a + b) + c$	Associative	_____
6. $k + 0$	Identity	_____
7. $7(3x)$	Associative	_____
8. $4(2y - 5)$	Distributive	_____
9. $c \cdot 1$	Identity	_____

Identify the property used to transform the first expression into the second expression.

First Expression	Second Expression	Name of Property
10. $4 + (5 + 9)$	$(4 + 5) + 9$	_____
11. $17 - (6 + 8)$	$17 - (8 + 6)$	_____
12. $8(2w + 5)$	$16w + 40$	_____
13. $8 \cdot (4 \cdot 5)$	$(8 \cdot 4) \cdot 5$	_____
14. $v \cdot 1$	$v$	_____
15. $4(5n)$	$(4 \cdot 5)n$	_____
16. $3(7p)$	$21p$	_____
17. $84 + 0$	$84$	_____
18. $-5(13u)$	$-65u$	_____

Count the number of times you used each property in Exercises 10–18 above. Write each count above the property name below to find the least perfect square greater than 1500.

\_\_\_\_\_

Commutative

\_\_\_\_\_

Associative

\_\_\_\_\_

Identity

\_\_\_\_\_

Distributive